

United States of America  
Department of Transportation -- Federal Aviation Administration  
**Supplemental Type Certificate**

*Number* ST00039MC

*This certificate issued to:*

Rockwell Collins Aerospace and Electronics, Inc.  
27300 SW Parkway Avenue  
Wilsonville, OR 97070

*certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 25 of the Federal Aviation Regulations.*

*Original Product - Type Certificate Number:* A16WE

*Make:* Boeing

*Model:* 737-700, -700C, -800, -900, and -900ER Series  
(See FAA Approved Model List ST00039MC for  
Specific Model and Airplane Serial No. Eligibility)

*Description of Type Design Change:*

Installation of the Rockwell Collins Model 4000 Head-Up Guidance System (HGS) with Enhanced Vision System (EVS) capability, in accordance with Rockwell Collins Master Drawing List 9701-1018 Revision C, dated June 17, 2010, or later FAA approved revision. FAA Approved Airplane Flight Manual Supplement (AFMS) for the Installation of the HGS with EVS Capability, Rockwell Collins Document Numbers 9701-1298, Rev. 0, or 9701-1299, Rev. 0, or 9701-1300, Rev. 0, or later FAA approved revisions, is required as part of this installation. Instructions for Continued Airworthiness (ICA) for Model 4000 HGS with EVS capability, Rockwell Collins Document Number 964-5937-001, Rev. B, or later FAA accepted revision must be made available to the operator at the time of installation.  
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*Limitations and Conditions:*

The performance of Model 4000 HGS has demonstrated acceptability as a supplementary display of primary flight information for situational awareness. The HGS with EVS capability has demonstrated that the EVS image does not degrade safety of flight or interfere with required pilot tasks during any phase of flight. Operational credit per CFR 91.175 (I), for conducting reduced minima operations to 100 ft is NOT approved and will require further FAA evaluation.  
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*Date of application:* September 22, 2008

*Date reissued:*

*Date of issuance:* July 30, 2010

*Date amended:*



*This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration*

*By direction of the Administrator*

*Ronald K. Rathgeber*  
(Signature)

Ronald K. Rathgeber  
Manager  
Military Certification Office  
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Regional Office of the transfer of this Supplemental type certificate.

The FAA will reissue the certificate in the name of the transferee and forward it to him.

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## TRANSFER ENDORSEMENT

Transfer the ownership of the Supplemental Type Certificate Number \_\_\_\_\_

to (*Name of transferee*) \_\_\_\_\_

(*Address of transfer*) \_\_\_\_\_

*(Number and street)*

\_\_\_\_\_  
*(City, State, and Zip code)*

from (*Name of grantor*) (*Print or type*) \_\_\_\_\_

(*Address of grantor*) \_\_\_\_\_

*(Number and street)*

\_\_\_\_\_  
*(City, State, and Zip code)*

Extent of Authority (if licensing agreement): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date of Transfer: \_\_\_\_\_

Signature of grantor (*In ink*): \_\_\_\_\_

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*Description of Type Design Change:* (continued)

This STC provides an Enhanced Vision System Operational Upgrade to the Rockwell Collins Model 4000 Head-Up Guidance System, installed on Boeing 737 Series airplanes in accordance with FAA STC ST00845SE and FAA approved Master Drawing List, Rockwell Collins Document Number 9701-1010, Revision BF, or later FAA approved revision.

STC ST00039MC also requires concurrent installation of the Nordam Radome Installation with optical window provisions defined by FAA STC SA8830SW.

There are other Boeing service modifications and provisions which are required to support compatible configurations for the installation of STC ST00039MC, which vary for different Boeing Model 737 Series airplanes. See Section 3 of the FAA Approved Master Drawing List, Rockwell Collins Document 9701-1018, Revision C, or later FAA Approved revisions, to determine specific pre-requisite requirements to define compatible aircraft configurations for the Boeing Model 737-700, -700C, -800, -900, and -900ER Series aircraft serial numbers.

A list of FAA approved Boeing 737 Model Series and specific aircraft serial numbers eligible for installation of this STC is provided on Approved Model List (AML) Number ST00039MC.

The certification basis applicable to the modifications approved by STC ST00039MC is provided on Continuation Sheet 4 of this STC certificate.

*Limitations and Condition:* (continued)

Approval of this change in type design applies to the above model aircraft series only. This approval should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previous approved configuration will not introduce any adverse effect upon the airworthiness of the aircraft. If the STC holder agrees to permit another person to use this Certificate to alter the product, the holder shall give the other person written evidence of that permission.

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*Certification Basis:*

Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, the certification basis for the Rockwell Collins Model 4000 Head-Up Guidance System (HGS) with Enhanced Vision System (EVS) capability as installed on Boeing 737-700, -700C, -800, -900, and -900ER series airplanes is as follows:

- a. Special Conditions 25-405-SC: Rockwell Collins, Inc., Boeing Model 737-700, -700C, -800, -900 and -900ER series Airplanes Equipped with Rockwell HGS-4000 Head-Up Guidance System with Enhanced Vision System Functionality.
- b. The type certification basis for Boeing 737-700, -700C, -800, -900, and -900ER series airplanes is as shown on TCDS A16WE for parts **not changed or not affected** by this STC.
- c. The certification basis for parts **changed or affected** by this STC since the reference date of amendment application, September 22, 2008, is based upon part 25 as amended by Amendment 25-128. Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, the certification basis for this modification was determined to be:

Regulations at the latest amendment 25-0 through 25-128:

25.303	(Amdt 25-23)	All	25.1317	(Amdt 25-122)	All
25.305	(Amdt 25-86)	(a),(b)	25.1321	(Amdt 25-41)	(a)
25.305	(Amdt 25-86)	(a),(b),(c),(d)	25.1322	(Amdt 25-38)	(a),(b),(c),(d)
25.307	(Amdt 25-72)	All	25.1323	(Amdt 25-109)	(a)
25.561	(Amdt 25-91)	(b),(c),(d)	25.1329	(Amdt 25-119)	(h)
25.562	(Amdt 25-64)	(a)	25.1331	(Amdt 25-41)	(a),(b)
25.571	(Amdt 25-93)	(e)(1)	25.1333	(Amdt 25-41)	(a),(b),(c)
25.581	(Amdt 25-23)	(a),(b),(c)	25.1351	(Amdt 25-72)	(a)
25.601	(Amdt 25-0)	All	25.1353	(Amdt 25-123)	(a),(c)
25.603	(Amdt 25-46)	(a),(b),(c)	25.1355	(Amdt 25-38)	(c)
25.605	(Amdt 25-46)	(a),(b)	25.1357	(Amdt 25-123)	(a),(c),(d),(e),(g)
25.613	(Amdt 25-112)	(a),(b),(c)	25.1381	(Amdt 25-72)	(a),(b)
25.621	(Amdt 25-0)	(a),(b),(c),(d)	25.1411	(Amdt 25-116)	(a),(b),(c)
25.623	(Amdt 25-0)	(a),(b)	25.1431	(Amdt 25-113)	(a),(b),(c)
25.625	(Amdt 25-72)	(a),(b),(c)	25.1459	(Amdt 25-124)	(e)
25.771	(Amdt 25-4)	(a)	25.1501	(Amdt 25-42)	(a),(b)
25.773	(Amdt 25-121)	(a)	25.1525	(Amdt 25-0)	All
25.777	(Amdt 25-46)	(a),(b),(c)	25.1529	(Amdt 25-54)	All
25.785	(Amdt 25-88)	(b),(d),(k)	25.1541	(Amdt 25-0)	(a),(b)
25.789	(Amdt 25-46)	(a)	25.1543	(Amdt 25-72)	(b)
25.803	(Amdt 25-72)	(a)	25.1545	(Amdt 25-0)	All
25.807	(Amdt 25-114)	(j)	25.1555	(Amdt 25-0)	(a)
25.809	(Amdt 25-116)	(a)	25.1581	(Amdt 25-72)	(a),(b),(d)
25.810	(Amdt 25-114)	(a)	25.1583	(Amdt 25-105)	(d),(e),(h)
25.853	(Amdt 25-116)	(a)	25.1585	(Amdt 25-105)	(a),(b)
25.1301	(Amdt 25-123)	(a),(b)	26.11	(Amdt 26-0)	(a),(c)(1),(2),(d)(5)
25.1303	(Amdt 25-90)	(b),(c)	26.47	(Amdt 26-1)	(a),(c),(e)(1),(2),(3)
25.1307	(Amdt 25-72)	(c)	26.49	(Amdt 26-1)	(a),(b)(2),(3),(c)
25.1309	(Amdt 25-123)	(a),(b),(c),(d),(e),(f)			
25.1316	(Amdt 25-80)	(a),(b),(c)			